## Faculty of Engineering, Chemical Engineering Department Curriculum

(Intern Engineering Education- Plan A) 1. SEMESTER COURSE PLAN ECTS Mathematics I CHE-1001 Mandatory Physics I Mandatory CHE-1005 General Chemistry I 2 2 3 5 Mandatory Mandatory 2 0 2 4 CHE-1007 Introduction to Chemical Engineering Principles of Atatürk and History of Mandatory 2 ATA-1001 0 2 Revolution I TDI-1001 0 Mandatory Turkish Language I Mandatory YDI-1001 English I 0 Introduction to Information Mandatory CHE-1009 2 2 0 3 Technologies and Applications CHE-1017 General Chemistry Laboratory 0 Mandatory Elective 0 0 Mandatory Emergency First Aid I CHE-1013 0 0 Elective Elective CHE-1015 Mobile Marketing 2 0 0 CHE-1019 Career Planning 0 1 Elective TOTAL CREDITS FOR SEMESTER 18 10 18 K ECTS 3. SEMESTER COURSE PLAN CHE-2001 Differential Equation 2 2 3 4 Mandatory Mandatory CHE-2003 Analytical Chemistry 2 2 3 5 CHE-2005 Physical Chemistry Mandatory CHE-2007 Instrumental Analysis 4 Mandatory Mandatory 2 CHE-2009 Occupational Health and Safety I 0 2 2 CHE-2011 Technical English 0 Mandatory Mandatory CHE-2013 Instrumental Analysis Laboratory 0 2 4 Elective 0 Mandatory 0 CHE-2017 Report Writing Technique 0 Elective CHE-2019 Statistics and Probability 0 Elective CHE-2021 Quality Management 0 Elective CHE-2023 Business Law 0 Elective Workplace Risk Analysis 0 TOTAL CREDITS FOR SEMESTER 10 21 30 16 5. SEMESTER COURSE PLAN ECTS CHE-3001 Thermodynamic I Mandatory CHE-3003 Chemical Reaction Engineering Mandatory Mandatory CHE-3005 Heat and Mass Transfer 4 Mathematical Modeling in Chemical Mandatory CHE-3007 3 Engineering Computer Modeling and Simulation Mandatory 2 BLM-3009 0 2 2 Laboratory CHE-3011 0 Mandatory Internship I 0 0 Elective 0 Mandatory Elective 0 Mandatory Elective Ceramic Materials 0 CHE-3015 Composite Material 0 Elective CHE-3017 Polymer Science 0 2 Elective Elective CHE-3019 Wastewater Treatment Technology 2 0 2 2 CHE-3021 Adsorption 0 2 Elective TOTAL CREDITS FOR SEMESTER 16 8 20 30 7. SEMESTER COURSE PLAN CHE-4001 Process Design Mandatory 0 CHE-4003 Process Control 4 Mandatory Mandatory CHE-4005 Chemical Engineering Applications 0 4 2 5 CHE-4007 Chemical Technologies 0 Mandatory CHE-4009 0 Graduation Project 6 Mandatory Mandatory Elective 0 Elective 0 Mandatory CHE-4013 Textile Che 0 Elective Elective 2 2 2 CHE-4015 Colloid Chemistry 0 CHE-4019 Extractive Metallurgy and Applications 0 Elective Elective 2 CHE-4021 Energy Management 0 2 2 English Written and Oral Elective CHE-4023 2 0 3 5 Communication Intellectual and Industrial Property Elective 2 CHE-4025 0 3 5

TOTAL CREDITS FOR SEMESTER

12 19

30

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	2. SEMESTER COURSE PLAN	L	U	C	ECTS	
CHE-1002	Mathematics II	2	2	3	5	Mandatory
CHE-1004	Physics II	2	2	3	5	Mandatory
CHE-1006	General Chemistry II	2	2	3	5	Mandatory
CHE-1008	Computer Based Technical Drawing Laboratory	2	2	3	6	Mandatory
ATA-1002	Principles of Atatürk and History of Revolution II	2	0	2	1	Mandatory
TDI-1002 YDI-1002	Turkish Language II English II	2	0	2	2	Mandatory Mandatory
					4	Mandatory
CHE-1016	General Physics Laboratory	0	2	1	·	•
CHE-1012	Elective Emergency First Aid II	2	0	0	1	Mandatory Elective
CHE-1024	Advertising Management	2	0	0	1	Elective
CHE-1030	Corporate Culture and Value Systems in Engineering	2	0	0	1	Elective
	TOTAL CREDITS FOR SEMESTER	16	10	19	30	
	4. SEMESTER COURSE	L	U	К	ECTS	
CHE 2002	PLAN	4	0	4		Mandatory
CHE-2002	Mass and Energy Balance Analytical Chemistry				5	Mandatory
CHE-2004	Laboratory	0	2	1	2	•
CHE-2006	Fluid Mechanics	2	2	3	4	Mandatory
CHE-2008	Inorganic Chemistry Occupational Health and	2	2	3	4	Mandatory Mandatory
CHE-2010	Safety II	2	0	2	2	Mandatory
CHE-2012	Organic Chemistry	2	2	3	4	Mandatory
CHE-2014	Inorganic Chemistry and Organic Chemistry Laboratory	0	4	2	3	Mandatory
	Elective	2	0	2	2	Mandatory
	Elective	2	0	2	2	Mandatory
	Elective	2	0	2	2	Mandatory
CHE-2016	Nanotechnology	2	0	2	2	Elective
CHE-2028 CHE-2018	Numerical Analysis Renewable Energy	2	0	2	2	Elective Elective
CHE-2020	Food Technology	2	0	2	2	Elective
CHE-2022	Petroleum Chemistry	2	0	2	2	Elective
CHE-2024	Boron Technology	2	0	2	2	Elective
CHE-2026	Business and Entrepreneurship	2	0	2	2	Elective
	TOTAL CREDITS FOR SEMESTER	18	12	24	30	
	6. SEMESTER COURSE					
	PLAN	L	U	K	ECTS	
CHE-3002	PLAN Thermodynamic II	2	2	3	5	Mandatory
CHE-3004	PLAN Thermodynamic II Reactor Design	2 2	2	3	5 5	Mandatory
CHE-3004 CHE-3006	PLAN Thermodynamic II Reactor Design Device Design	2	2	3 3 4	5 5 6	
CHE-3004	PLAN Thermodynamic II Reactor Design	2 2 3	2 2 2	3	5 5	Mandatory Mandatory
CHE-3004 CHE-3006 CHE-3008	PLAN Thermodynamic II Reactor Design Device Design Basic Operations	2 2 3 4	2 2 2 2	3 3 4 4	5 5 6	Mandatory Mandatory Mandatory Mandatory
CHE-3004 CHE-3006 CHE-3008	PLAN Thermodynamic II Reactor Design Device Design Basic Operations Engineering Economics	2 2 3 4 2	2 2 2 2 0	3 3 4 4 2	5 5 6 6	Mandatory Mandatory Mandatory
CHE-3004 CHE-3006 CHE-3008 CHE-3010	PLAN Thermodynamic II Reactor Design Device Design Basic Operations Engineering Economics Elective Elective Elective	2 2 3 4 2 2 2 2	2 2 2 2 0 0 0	3 3 4 4 2 2 2 2	5 5 6 6 2 2 2 2 2	Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory
CHE-3004 CHE-3006 CHE-3008	PLAN Thermodynamic II Reactor Design Device Design Basic Operations Engineering Economics Elective Elective Elective Engineering Mechanics	2 2 3 4 2 2 2 2 2	2 2 2 2 0 0 0 0	3 3 4 4 2 2 2 2 2 2	5 5 6 6 2 2 2 2 2 2	Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Elective
CHE-3004 CHE-3006 CHE-3008 CHE-3010 CHE-3012	PLAN Thermodynamic II Reactor Design Device Design Basic Operations  Engineering Economics Elective Elective Elective Elective Engineering Mechanics Paper Industry	2 2 3 4 2 2 2 2 2 2	2 2 2 2 0 0 0 0 0	3 3 4 4 2 2 2 2 2 2 2	5 5 6 6 2 2 2 2 2 2 2 2	Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Elective Elective
CHE-3004 CHE-3006 CHE-3008 CHE-3010 CHE-3011	PLAN Thermodynamic II Reactor Design Device Design Basic Operations  Engineering Economics Elective Elective Elective Engineering Mechanics Paper Industry Fuel Technology	2 2 3 4 2 2 2 2 2 2 2 2	2 2 2 2 0 0 0 0 0 0	3 3 4 4 2 2 2 2 2 2 2 2 2	5 5 6 6 2 2 2 2 2 2 2 2 2 2	Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Elective Elective
CHE-3004 CHE-3006 CHE-3008 CHE-3010 CHE-3012 CHE-3016 CHE-3018	PLAN Thermodynamic II Reactor Design Device Design Basic Operations Engineering Economics Elective Elective Elective Engineering Mechanics Paper Industry Fuel Technology Polymer Chemistry and Technology	2 2 3 4 2 2 2 2 2 2 2 2 2	2 2 2 2 0 0 0 0 0 0 0	3 3 4 4 2 2 2 2 2 2 2 2 2 2 2 2	5 5 6 6 2 2 2 2 2 2 2 2 2 2 2 2	Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Elective Elective Elective
CHE-3004 CHE-3006 CHE-3008 CHE-3010 CHE-3011	PLAN Thermodynamic II Reactor Design Device Design Basic Operations Engineering Economics Elective Elective Elective Engineering Mechanics Paper Industry Fuel Technology Polymer Chemistry and	2 2 3 4 2 2 2 2 2 2 2 2	2 2 2 2 0 0 0 0 0 0	3 3 4 4 2 2 2 2 2 2 2 2 2	5 5 6 6 2 2 2 2 2 2 2 2 2 2	Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Elective Elective
CHE-3004 CHE-3006 CHE-3008 CHE-3010 CHE-3011 CHE-3016 CHE-3018 CHE-3020	PLAN Thermodynamic II Reactor Design Device Design Basic Operations Engineering Economics Elective Elective Elective Engineering Mechanics Paper Industry Fuel Technology Polymer Chemistry and Technology Electrochemical Technologies Management Planning and Efficiency in Engineering TOTAL CREDITS FOR SEMESTER	2 2 3 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 2 2 0 0 0 0 0 0 0 0 0	3 3 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 6 6 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Elective Elective Elective Elective
CHE-3004 CHE-3006 CHE-3008 CHE-3010 CHE-3011 CHE-3016 CHE-3018 CHE-3020	PLAN Thermodynamic II Reactor Design Device Design Basic Operations  Engineering Economics Elective Elective Elective Engineering Mechanics Paper Industry Fuel Technology Polymer Chemistry and Technology Electrochemical Technologies Management Planning and Efficiency in Engineering TOTAL CREDITS FOR SEMESTER 8. SEMESTER COURSE PLAN	2 2 3 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 2 2 2 0 0 0 0 0 0 0 0 0 0	3 3 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 6 6 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Elective Elective Elective Elective Elective Elective
CHE-3004 CHE-3006 CHE-3008 CHE-3010 CHE-3011 CHE-3016 CHE-3018 CHE-3020	PLAN Thermodynamic II Reactor Design Device Design Basic Operations Engineering Economics Elective Elective Elective Engineering Mechanics Paper Industry Fuel Technology Polymer Chemistry and Technology Electrochemical Technologies Management Planning and Efficiency in Engineering TOTAL CREDITS FOR SEMESTER 8. SEMESTER COURSE PLAN Elective	2 2 3 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 2 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 3 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 6 6 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Elective Elective Elective Elective Elective Mandatory Elective Elective
CHE-3004 CHE-3006 CHE-3008 CHE-3010 CHE-3012 CHE-3016 CHE-3018 CHE-3020	PLAN Thermodynamic II Reactor Design Device Design Basic Operations Engineering Economics Elective Elective Elective Engineering Mechanics Paper Industry Fuel Technology Polymer Chemistry and Technology Management Planning and Efficiency in Engineering TOTAL CREDITS FOR SEMESTER 8. SEMESTER COURSE PLAN Elective	2 2 3 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 2 2 2 2 0 0 0 0 0 0 0 0 0 0 0 0	3 3 4 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 6 6 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Elective Elective Elective Elective Mandatory Elective Elective Elective
CHE-3004 CHE-3006 CHE-3008 CHE-3010 CHE-3012 CHE-3016 CHE-3018 CHE-3020	PLAN Thermodynamic II Reactor Design Device Design Basic Operations Engineering Economics Elective Elective Elective Engineering Mechanics Paper Industry Fuel Technology Polymer Chemistry and Technology Management Planning and Efficiency in Engineering TOTAL CREDITS FOR SEMESTER 8. SEMESTER COURSE PLAN Elective Elective	2 2 3 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 2 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 3 4 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 6 6 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Elective Elective Elective Elective Elective Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory
CHE-3004 CHE-3006 CHE-3008 CHE-3010 CHE-3012 CHE-3016 CHE-3018 CHE-3020	PLAN Thermodynamic II Reactor Design Device Design Basic Operations Engineering Economics Elective Elective Elective Engineering Mechanics Paper Industry Fuel Technology Polymer Chemistry and Technology Management Planning and Efficiency in Engineering TOTAL CREDITS FOR SEMESTER 8. SEMESTER COURSE PLAN Elective	2 2 3 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 2 2 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 3 4 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 6 6 2 2 2 2 2 2 2 2 2 2 2 2 2	Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Elective Elective Elective Elective Elective Mandatory
CHE-3004 CHE-3006 CHE-3008 CHE-3010 CHE-3012 CHE-3016 CHE-3018 CHE-3020	PLAN Thermodynamic II Reactor Design Device Design Basic Operations Engineering Economics Elective Elective Elective Engineering Mechanics Paper Industry Fuel Technology Polymer Chemistry and Technology Electrochemical Technologies Management Planning and Efficiency in Engineering TOTAL CREDITS FOR SEMESTER 8. SEMESTER COURSE PLAN Elective Elective Elective Elective	2 2 3 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 2 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 3 4 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 6 6 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Elective Elective Elective Elective Elective Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory
CHE-3004 CHE-3006 CHE-3008 CHE-3010 CHE-3011 CHE-3016 CHE-3018 CHE-3020 CHE-3022	PLAN Thermodynamic II Reactor Design Device Design Basic Operations Engineering Economics Elective Elective Elective Engineering Mechanics Paper Industry Fuel Technology Polymer Chemistry and Technology Electrochemical Technologies Management Planning and Efficiency in Engineering TOTAL CREDITS FOR SEMESTER 8. SEMISSTER COURSE PLAN Elective Elective Elective Elective Elective	2 2 3 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 2 2 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 3 4 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 6 6 2 2 2 2 2 2 2 2 2 2 2 2 2 2 5 5 6 6 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Mandatory Elective Elective Elective Elective  Elective Mandatory
CHE-3004 CHE-3006 CHE-3008 CHE-3010 CHE-3011 CHE-3016 CHE-3018 CHE-3020 CHE-3022	PLAN Thermodynamic II Reactor Design Device Design Basic Operations Engineering Economics Elective Elective Elective Engineering Mechanics Paper Industry Fuel Technology Polymer Chemistry and Technology Electrochemical Technologies Management Planning and Efficiency in Engineering TOTAL CREDITS FOR SEMESTER 8. SEMESTER COURSE PLAN Elective Elective Elective Elective Elective Elective Elective Internship II	2 2 3 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 2 2 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 3 4 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 6 6 2 2 2 2 2 2 2 2 2 2 2 2 2 2 5 5 6 6 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Elective Elective Elective Elective Elective Mandatory
CHE-3004 CHE-3006 CHE-3008 CHE-3010 CHE-3011 CHE-3016 CHE-3018 CHE-3020 CHE-3022	PLAN Thermodynamic II Reactor Design Device Design Basic Operations Engineering Economics Elective Elective Elective Engineering Mechanics Paper Industry Fuel Technology Polymer Chemistry and Technology Electrochemical Technologies Management Planning and Efficiency in Engineering TOTAL CREDITS FOR SEMESTER 8. SEMISSTER COURSE PLAN Elective Elective Elective Elective Elective	2 2 3 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 2 2 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 3 4 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 6 6 2 2 2 2 2 2 2 2 2 2 2 2 2 2 5 5 6 6 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Mandatory Elective Elective Elective Elective  Elective Mandatory
CHE-3004 CHE-3006 CHE-3008 CHE-3010 CHE-3012 CHE-3016 CHE-3018 CHE-3020 CHE-3022	PLAN Thermodynamic II Reactor Design Device Design Basic Operations  Engineering Economics Elective Elective Elective Engineering Mechanics Paper Industry Fuel Technology Polymer Chemistry and Technology Electrochemical Technologies Management Planning and Efficiency in Engineering TOTAL CREDITS FOR SEMESTER 8. SEMESTER COURSE PLAN Elective Elective Elective Elective Elective Elective Internship II	2 2 3 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 2 2 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 3 4 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 6 6 2 2 2 2 2 2 2 2 2 2 2 2 2 2 5 5 6 6 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Elective Elective Elective Elective Mandatory
CHE-3004 CHE-3006 CHE-3008 CHE-3010 CHE-3012 CHE-3016 CHE-3018 CHE-3020 CHE-3022 CHE-3022 CHE-3022	PLAN Thermodynamic II Reactor Design Device Design Basic Operations Engineering Economics Elective Elective Elective Engineering Mechanics Paper Industry Fuel Technology Polymer Chemistry and Technology Polymer Chemistry and Technologis Management Planning and Efficiency in Engineering TOTAL CREDITS FOR SEMESTER 8. SEMESTER COURSE PLAN Elective Elective Elective Elective Elective Elective Internship II  Membrane and Membrane Process Introduction to Biotechnology Material Science	2 2 3 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 2 2 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 3 4 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 6 6 2 2 2 2 2 2 2 2 2 2 2 2 2	Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Elective Elective Elective Elective Mandatory Mendatory Mandatory Mandatory Mendatory Mandatory Mandatory Mendatory Mandatory Mandatory Mendatory Mandatory Mendatory
CHE-3004 CHE-3006 CHE-3008 CHE-3010 CHE-3012 CHE-3016 CHE-3018 CHE-3020 CHE-3022 CHE-3022 CHE-4030	PLAN Thermodynamic II Reactor Design Device Design Basic Operations Engineering Economics Elective Elective Elective Engineering Mechanics Paper Industry Fuel Technology Polymer Chemistry and Technology Electrochemical Technologies Management Planning and Efficiency in Engineering TOTAL CREDITS FOR SEMESTER 8. SEMESTER COURSE PLAN Elective Elective Elective Elective Elective Internship II  Membrane and Membrane Process Introduction to Biotechnology Material Science Hydrogen Energy and Fuel Cell Technology	2 2 3 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 2 2 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 3 4 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 6 6 2 2 2 2 2 2 2 2 2 2 2 2 2	Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Elective Elective Elective Elective Mandatory
CHE-3004 CHE-3006 CHE-3008 CHE-3010 CHE-3011 CHE-3016 CHE-3018 CHE-3020 CHE-3022 CHE-3022 CHE-4022 CHE-4028 CHE-4028	PLAN Thermodynamic II Reactor Design Device Design Basic Operations Engineering Economics Elective Elective Elective Engineering Mechanics Paper Industry Fuel Technology Polymer Chemistry and Technology Electrochemical Technologies Management Planning and Efficiency in Engineering TOTAL CREDITS FOR SEMESTER 8. SEMISSTER COURSE PLAN Elective Elective Elective Elective Elective Internship II  Membrane and Membrane Process Introduction to Biotechnology Material Science Hydrogen Energy and Fuel Cell Technology Environmental Technology Environmental Technology	2 2 3 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 2 2 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 3 4 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 6 6 2 2 2 2 2 2 2 2 2 2 2 2 30 ECTS 5 5 5 5 5 6	Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Mandatory Elective Elective Elective Elective Mandatory Mendatory Mandatory Mandatory Mendatory Mandatory Mandatory Mendatory Mandatory Mandatory Mendatory Mandatory Mendatory
CHE-3004 CHE-3006 CHE-3008 CHE-3010  CHE-3012 CHE-3016 CHE-3018 CHE-3020 CHE-3022  CHE-4030  CHE-4030  CHE-4030  CHE-4028 CHE-4024	PLAN Thermodynamic II Reactor Design Device Design Basic Operations  Engineering Economics Elective Elective Elective Engineering Mechanics Paper Industry Fuel Technology Polymer Chemistry and Technology Electrochemical Technologies Management Planning and Efficiency in Engineering TOTAL CREDITS FOR SEMESTER 8. SEMESTER COURSE PLAN Elective Elective Elective Elective Elective Elective Elective Internship II  Membrane and Membrane Process Introduction to Biotechnology Material Science Hydrogen Energy and Fuel Cell Technology Environmental Technology and Design TOTAL CREDITS FOR	2 2 3 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 2 2 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 3 4 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 6 6 2 2 2 2 2 2 2 2 2 2 2 30 ECTS 5 5 5 5 5 5	Mandatory Elective Elective Elective Elective  Elective Elective Elective Elective Elective Elective Elective Elective Elective Elective Elective Elective Elective Elective Elective Elective Elective Elective
CHE-3004 CHE-3006 CHE-3008 CHE-3010  CHE-3011  CHE-3016 CHE-3018 CHE-3020 CHE-3022  CHE-4020 CHE-4026  CHE-4026	PLAN Thermodynamic II Reactor Design Device Design Basic Operations Engineering Economics Elective Elective Elective Elective Engineering Mechanics Paper Industry Fuel Technology Polymer Chemistry and Technology Electrochemical Technologies Management Planning and Efficiency in Engineering TOTAL CREDITS FOR SEMESTER 8. SEMESTER COURSE PLAN Elective Elective Elective Elective Elective Internship II  Membrane and Membrane Process Introduction to Biotechnology Material Science Hydrogen Energy and Fuel Cell Technology Environmental Technology and Design	2 2 3 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 2 2 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 3 4 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 5 6 6 2 2 2 2 2 2 2 2 2 2 2 30 ECTS 7 6 5 5 5 5 6 6 5 6 6 7 6 6 6 7 6 6 6 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8	Mandatory Elective Elective Elective Elective Mandatory Elective Elective Elective Elective